

### REMARKS

Reconsideration and allowance are respectfully requested in light of the above amendments and the following remarks.

Applicants acknowledge with appreciation the indication in the Office Action that claim 8 is allowable.

Claims 1-12 have been canceled in favor of new claims 13-24. Support for the subject matter of the new claims is provided in the original claims.

Claims 1-3, 11, and 12 were rejected, under 35 USC §102(b), as being anticipated by Sugiyama et al. (US 5,862,175). Claims 9 and 10 were rejected, under 35 USC §103(a), as being unpatentable over Sugiyama in view of Applicant's Discussion of the Related Art (ADRA). Claims 4-7 were rejected, under 35 USC §103(a), as being unpatentable over Sugiyama in view of Lee et al. (US 6,259,744). To the extent the rejections may be deemed applicable to new claims 13-24, the Applicants respectfully traverse.

New claim 13 recites: (1) a transmitting apparatus that simultaneously transmits a number of error detecting units, in accordance with a modulation level determined by the transmitting apparatus, as a transmission unit and (2) a receiving apparatus

that receives the transmission unit and demodulates the error detecting units using different demodulation patterns, respectively, that apply to the modulation scheme of the largest determined modulation level. In a system employing an adaptive modulation communication scheme, the above-noted features of the present invention have an advantage of enabling excellent demodulation at the receiving end without sending information about modulation schemes and such. Independent claim 23 corresponds to the receiving apparatus recited in claim 13. New claim 24 recites a transmitting apparatus that communicates with the receiving apparatus of claim 23.

By contrast to the above-noted claimed features, Sugiyama discloses a system having, at the transmitting end, a means for performing error correction coding per parallel  $n$  channels and a  $2^n$  phase modulation means and, at a receiving end, a demodulation means for performing demodulation and outputting parallel  $n$  channels. In other words, Sugiyama discloses a system having a transmitting apparatus including a means for performing error correction decoding per parallel  $n$ -channels and a  $2^n$  phase modulation means and a receiving apparatus that performs

demodulation in accordance with the modulation schemes employed in the transmitting apparatus.

Lee discloses a demodulation means for performing demodulation at the receiving end using demodulation patterns in accordance with the modulation scheme used in the transmitting end.

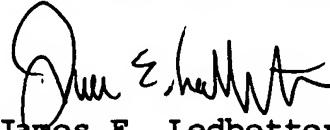
The ADRA is not cited in the Office Action for teaching the above-described features of the invention.

Accordingly, the Applicants submit that the applied references, alone or in combination, do not anticipate or suggest the subject matter of independent claims 13 and 23. More specifically, the references do not suggest the recited features of receiving at a receiving end a transmission unit and demodulating error detecting units in the transmission unit using different demodulation patterns, respectively, using demodulation patterns that apply to a modulation scheme of the largest prospective modulation level. Therefore, allowance of claims 13 and 23 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,



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JEL/DWW/att

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